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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,556	08/28/2001	Hyun-Don Oh	SEC.836	3479

7590 10/04/2002
JONES VOLENTINE, P.L.L.C.
Suite 150
12200 Sunrise Valley Drive
Reston, VA 20191

EXAMINER

GEYER, SCOTT B

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,556

Applicant(s)

OH ET AL.

Examiner

Scott B. Geyer

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-12 is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of the claims must be shown or the feature(s) canceled from the claim(s). For example the following features of the claims are not clearly and expressly shown: a first semiconductor process unit installed higher than a second semiconductor processing unit; a first semiconductor processing unit installed in a first position and a second semiconductor processing unit installed in a second position where clean air flows from the second position to the first position; a method of fabricating a semiconductor device wherein a second location is higher than a first location. No new matter should be entered. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by the applicant's admitted prior art.

As to **claim 1**, the applicant's prior art teach first and second semiconductor processing units wherein one of the processing units, specifically the processing unit which performs in-line photolithography, produces a deteriorating gas as a by-product of its operation (see specification page 3, 1st through 4th paragraphs and page 4, first paragraph). As to the language of claim 1 which recites "wherein the second semiconductor process unit is installed at a higher level than the first semiconductor process unit", the applicant should note that this is merely a matter of design choice. Furthermore, neither the claim or the specification provide limitations as to the size and shape of the process units. The prior art does teach two process units used in conjunction in a semiconductor manufacturing environment – given the varied size and shape of the available semiconductor processing machines available in the market at the time of the invention, it would be inherent that a difference in height could be measured between two machines placed near one another in a manufacturing setting and could also be a matter of design choice. Further, without details from the claim, drawings or specification it is also unclear as to the applicant's meaning of one process unit installed at a higher level than a second process unit. Unless all semiconductor process units are exactly equal in dimensions, it would be obvious that one machine would be "higher" than another in overall height. As to claim 1 which recites that the "clean air flows downward over the first and second semiconductor process units to carry the process deteriorating gas away from the second process unit", this limitation has not been given patentable weight, as the method limitation does not give breadth or scope and fails to further limit the *product claim*.

As to **claim 2**, the applicant's prior art teach a processing unit which comprises an adhesion unit for improving the adhesion between the wafer and the photo-resist and a processing unit which is a bake unit, in the specification on page 3, 3rd full paragraph.

As to **claim 3**, the applicant's prior art teach a process deteriorating gas of ammonia in the specification on page 4, 1st paragraph.

As to **claim 4**, the applicant's prior art teach first and second semiconductor processing units wherein one of the processing units, specifically the processing unit which performs in-line photolithography, produces a deteriorating gas as a by-product of its operation (see specification page 3, 1st through 4th paragraphs and page 4, first paragraph). As to the language of claim 1 which recites "wherein the first semiconductor process unit is installed at a first position and the second semiconductor process unit is installed at second position", the applicant should note that this is merely a matter of design choice. The prior art does teach two process units used in conjunction in a semiconductor manufacturing environment – it is inherent from the prior art of two process units that one unit would be at a one position and a second unit at a second position in the manufacturing environment. As to claim 1 which recites that the "clean air flows downward over the first and second semiconductor process units to carry the process deteriorating gas away from the second process unit", this limitation has not been given patentable weight, as the method limitation does not give breadth or scope and fails to further limit the *product claim*.

As to **claim 5**, the applicant's prior art teach a processing unit which comprises an adhesion unit for improving the adhesion between the wafer and the photo-resist and a processing unit which is a bake unit, in the specification on page 3, 3rd full paragraph.

As to **claim 6**, the applicant's prior art teach a process deteriorating gas of ammonia in the specification on page 4, 1st paragraph.

As to **claim 7**, which recites the "fabricating device of claim 4, wherein the second position is at a higher location within the semiconductor fabricating device than the first position", As to the language of claim 1 which recites "wherein the second semiconductor process unit is installed at a higher level than the first semiconductor process unit", the applicant should note that this is merely a matter of design choice. Furthermore, neither the claim or the specification provide limitations as to the size and shape of the process units. The prior art does teach two process units used in conjunction in a semiconductor manufacturing environment – given the varied size and shape of the available semiconductor processing machines available in the market at the time of the invention, it would be inherent that a difference in height could be measured between two machines placed near one another in a manufacturing setting and could also be a matter of design choice. Further, without details from the claim, drawings or specification it is also unclear as to the applicant's meaning of one process unit installed at a higher level than a second process unit. Unless all semiconductor process units are exactly equal in dimensions, it would be obvious that one machine would be "higher" than another in overall height.

Allowable Subject Matter

4. Claims 8-12 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter: Applicant's independent claim 8 recites a *method* of fabricating a semiconductor device wherein a first process is performed at a first location and the first process produces a deteriorating gas. A second process is performed after the first process wherein the second process unit is located at a second location. Clean air is flowed from the second location to the first location so as to carry the process deteriorating gas away from the second processing unit. The references cited herein are related art disclosing semiconductor processing equipment, clean air filters and corrosive ammonia gas produced during semiconductor manufacturing environments. The prior art of record and to the examiner's knowledge does not teach or fairly suggest, at least to the skilled artisan, the instant invention regarding the method of fabricating a semiconductor device wherein first and second process units are located at first and second locations respectively, and clean air is flowed from the second location to the first location such that the deteriorating gas is carried away.

Conclusion

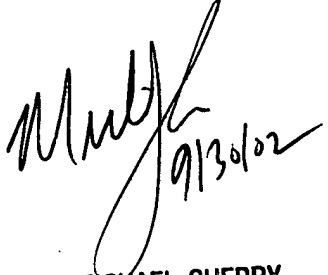
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott B. Geyer whose telephone number is (703) 306-5866. The examiner can normally be reached on weekdays, between 10:00am - 6:30pm. The examiner may also be reached via e-mail: scott.geyer@uspto.gov

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Sherry can be reached on (703) 308-1680. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

S.B.G.

S.B.G.
September 28, 2002


MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800